In the following, an embodiment of the present invention will be described in detail by referring to the accompanying drawings wherein FIG.6 is a block diagram showing an embodiment of a mobile station in CDMA communication system according to the present invention. In FIG.6, it is assumed that three paths (radio waves A, B, and C) reside in between a mobile station 10 and a base station 30. Like parts of a mobile station 30, which are shown in FIG.1, are designated by the same reference characters therein as those of FIG.6, and the description relating thereto will be omitted.

As shown in FIG.6, a finger allocating section 5 and a plurality of finger sections 6 are disposed in the mobile station 10 of the present embodiment in place of the finger allocating section 8 and the plurality of the finger sections 9 shown in FIG.1, and the remaining constitution of the mobile station 30 in FIG.6 is the same as that of FIG.1.

The finger allocating section 5 allocates path timings corresponding to peak positions of a plurality of radio waves detected by a delay profile section 4 to separate finger sections 6, respectively, and further decides a path tracking range in each of the finger sections 6 on the basis of respective distances of peak positions in the plurality of radio waves.

In each of the finger sections 6, a path tracking range is variable. Digital base band signals converted by an AD section 3 are inversely spread within a path tracking range decided by the finger allocating section 5 among segments positioned before and after a path timing allocated by the finger allocating section 5, whereby data transmitted from the base station 20 is regenerated.

In the following, a method for allocating a finger of a mobile

station in CDMA communication system constituted as described above will be described.

For instance, when three radio waves (radio waves A, B, and C) being arrived from the base station 20 to the mobile station 10 reside and distances of peak positions of the three radio waves are distant from one another as shown in FIG.2, the finger allocating section 5 broadens a path tracking range in each of the finger sections 6 (into, e.g., a five-point segment), while the finger allocating section 5 narrows a path tracking range in each of the finger sections 6 (into, e.g., a three-point segment) in the case where distances of peak positions of the three radio waves are narrow from one another as shown in FIG.5.

Thus, it becomes possible to conduct inverse spreading within a path tracking range independent from other path tracking ranges in each of the finger sections 6. Accordingly, it becomes possible to receive positively all the radio waves.

As described above, the present invention is constituted in such that a finger allocating section allocates path timings corresponding to peak positions of a plurality of radio waves being arrived from a base station through a plurality of paths to a plurality of finger sections, respectively, and further decides a path tracking range in each of the plurality of the finger sections on the basis of respective distances of peak positions in the plurality of radio waves, while the plurality of radio waves are inversely spread within a path tracking range decided by the finger allocating section among segments positioned before and after a path timing allocated by the finger allocating section in each of the finger sections, whereby data transmitted from the base station

is regenerated.

In these circumstances, for example, when a plurality of radio waves being arrived from the base station to a mobile station have distances of peak positions, which are distant from one another, the finger allocating section broadens a path tracking range in each of the finger sections, while the finger allocating section narrows a path tracking range in each of the finger sections. According to such arrangement as described above, inverse spreading can be conducted within a path tracking range independent from other path tracking ranges in each of the finger sections. Hence, it becomes possible to receive positively all the radio waves, whereby deterioration in reception property in the mobile station can be prevented.

Furthermore, even when peak positions in respective radio waves fluctuate due to a discrepancy in reference timing of a base station and a mobile station, influence of clock jitter inside the mobile station and the like, inverse spreading can be implemented within a path tracking range in response to fluctuations in the peak positions.

The presently disclosed embodiments are therefore considered in all respects to be illustrative and not restrictive. The scope of the invention is indicated by the appended claims rather than the foregoing description, and all changes that come within the meaning and range of equivalents thereof are intended to be embraced therein.